

CLAIMS

What is claimed is:

1. A turbine for an exhaust gas turbocharger, including a turbine wheel with a number of turbine wheel blades supported in a housing defining a first radial inlet flow channel, a variable guide vane structure arranged in said first inlet flow channel for guiding exhaust gas radially onto said turbine wheel, a second inlet flow channel which extends semi-axially to said turbine wheel for guiding exhaust gas to said turbine wheel in a semi-axial flow direction, said turbine wheel blades being arranged so as to define between circumferentially adjacent blades at the semi-axial second inlet flow channel a flow cross-section which has a minimum at its inlet end.
2. A turbine according to claim 1, wherein a guide vane structure with guide vanes is disposed in the semi-axial flow channel adjacent to said turbine wheel.
3. A turbine according to claim 2, wherein the entrance cross-section between two adjacent blades of said turbine wheel at the entrance of the second inlet flow channel is less than three times the exit cross-section between two adjacent guide vanes.
4. A turbine according to claim 3, wherein the entrance cross-section between two adjacent turbine wheel blades at the semi-axial entrance of the second flow channel is at least as large as the exit cross-section of the flow passage between two adjacent guide vanes of the guide vane structure.

5. A turbine according to claim 2, wherein said guide vanes in said semi-axial flow channel are stationary guide vanes.

6. A turbine according to claim 1, wherein said guide vane structure in said first radial inlet flow guide channel are adjustable guide vanes.

7. An exhaust gas turbocharger with a compressor and a turbine according to claim 1.

8. An internal combustion engine with an exhaust gas turbocharger according to claim 1,